

Help Wanted: Making a Difference in Health Care Part 3

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May 2003

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APPENDIX A: Statewide Employment and Wages for Health Care Occupations Requiring Bachelor's Degree or Less

Occupation	SOC Code ¹	Estimated Workers 2000	Estimated Workers 2010	Annual Openings	Median Hourly Wage	Mean Annual Wage
Ambulance Drivers and Attendants	53-3011	1,600	2,100	60	\$11.68	\$29,011
Biomedical Equipment Technicians ²	17-3023	35,000	39,300	1,180	\$21.94	\$47,159
Cardiovascular Technologists and Technicians	29-2031	2,800	3,900	180	\$19.24	\$40,778
Dental Assistants	31-9091	38,700	58,200	2,820	\$16.17	\$33,102
Dental Hygienists	29-2021	18,100	27,100	1,230	\$38.79	\$81,434
Dental Laboratory Technicians	51-9081	4,700	5,500	220	\$14.20	\$31,250
Diagnostic Medical Sonographers (Ultrasound)	29-2032	2,500	3,100	120	\$25.52	\$53,539
Dietetic Technicians	29-2051	2,800	3,900	200	\$12.75	\$26,595
Dietitians and Nutritionists	29-1031	3,700	4,600	200	\$24.16	\$50,484
Electrocardiograph Technicians ³	29-2031	2,800	3,900	180	\$19.24	\$40,778
Electroencephalographic (EEG) Technologists ⁴	29-9199	n/a	n/a	n/a	\$14.11	\$33,015
Emergency Medical Technicians and Paramedics	29-2041	12,400	15,600	670	\$12.70	\$30,394
Home Health Aides	31-1011	33,200	48,000	2,000	\$8.93	\$19,996
Licensed Practical & Licensed Vocational Nurses	29-2061	51,600	63,900	2,710	\$17.15	\$37,517
Medical and Clinical Laboratory Technicians	29-2012	13,200	16,200	650	\$15.88	\$35,069
Medical and Clinical Laboratory Technologists	29-2011	12,500	15,800	660	\$26.46	\$55,700
Medical and Health Services Managers	11-9111	17,400	23,400	950	\$34.83	\$76,815
Medical Appliance Technicians	51-9082	1,600	1,900	80	\$13.53	\$32,418
Medical Assistants	31-9092	50,500	77,100	4,350	\$12.61	\$27,120
Medical Coders ⁶	29-2071	13,600	20,300	1,050	\$19.31	n/a
Medical Equipment Preparers	31-9093	3,300	4,200	190	\$14.28	\$28,878
Medical Equipment Repairers	49-9062	3,400	4,600	220	\$14.20	\$35,453
Medical Records and Health Info Technicians	29-2071	13,600	20,300	1050	\$13.21	\$28,968
Medical Secretaries	43-6013	37,900	46,200	1,550	\$14.80	\$30,013
Medical Transcriptionists	31-9094	7,700	9,800	440	\$15.94	\$32,936
Music Therapists ⁷	29-1125	1,600	1,800	60	\$17.06	\$35,563
Nuclear Medicine Technologists	29-2033	1,100	1,400	60	\$27.61	\$57,212
Nursing Aides, Orderlies, and Attendants	31-1012	98,300	123,500	3,930	\$9.99	\$21,575
Occupational Therapist Aides	31-2012	590 ⁵	n/a	n/a	\$10.88	\$28,260
Occupational Therapist Assistants	31-2011	1,100	1,700	100	\$20.18	\$42,104
Occupational Therapists	29-1122	6,400	8,800	430	\$29.00	\$60,111
Opticians, Dispensing	29-2081	4,300	5,100	170	\$14.59	\$31,352
Personal and Home Care Aides	39-9021	30,000	48,900	2,490	\$8.37	\$19,023
Pharmacy Aides	31-9095	7,100	9,400	450	\$11.67	\$24,299
Pharmacy Technicians	29-2052	17,200	24,500	1,270	\$14.77	\$31,264
Physical Therapist Aides	31-2022	3,600	5,400	310	\$10.53	\$23,404
Physical Therapist Assistants	31-2021	3,900	5,800	330	\$20.53	\$41,684
Physician Assistants	29-1071	4,900	7,400	380	\$34.58	\$69,279
Psychiatric Aides	31-1013	1,700	1,900	40	\$10.99	\$23,587
Psychiatric Technicians	29-2053	11,500	12,000	350	\$18.11	\$37,210
Radiation Therapists	29-1124	560 ⁵	n/a	n/a	\$29.63	\$60,764
Radiologic Technologists and Technicians	29-2034	15,000	18,600	730	\$21.78	\$46,279
Recreation Workers	39-9032	34,300	43,200	1,690	\$9.03	\$20,764
Recreational Therapists	29-1125	1,600	1,800	60	\$17.06	\$35,563
Registered Nurses	29-1111	198,200	250,400	9,750	\$27.76	\$58,793
Respiratory Therapists	29-1126	8,800	12,100	590	\$21.21	\$45,603
Social and Human Service Assistants	21-1093	20,100	33,900	1,780	\$12.71	\$28,745
Surgical Technologists	29-2055	7,200	9,700	470	\$16.90	\$35,747
Totals		863,650	1,146,200	48,400		

Source: Unless otherwise noted, data comes from EDD/LMID's *Employment Projections by Occupation 2000-2010* and the *Occupational Employment Statistics (OES) Survey 2002*.

n/a = Information not available. ¹ Standard Occupational Classification (SOC) system. ² Data represents the broad occupational group, *Electrical and Electronic Engineering Technicians*, that includes Biomedical Equipment Technicians. ³ Wage data represents the broad occupational group, *Cardiovascular Technologists and Technicians*, that includes EKG Technicians. ⁴ Wages represent the broad occupational group, *All Other Health Professionals and Technicians*, that includes EEG Technologists. ⁵ *Occupational Employment Statistics (OES) Employment and Wages by Occupation*, EDD/LMID. ⁶ Employment data represents the broad occupational group, *Medical Records & Health Information Technicians* that includes Medical Coders. Wage data averages Southern California and Northern California median hourly wages received from Healthcare Association of Southern California.

⁷ Data represents the occupational group *Recreational Therapists* that includes Music Therapists.

APPENDIX B

Recruiting Difficulty

- | | |
|--------------------|---|
| Exhibit B-1 | Degree of Difficulty in Recruiting Registered Nurses |
| Exhibit B-2 | Degree of Difficulty in Recruiting Licensed Vocational Nurses |
| Exhibit B-3 | Degree of Difficulty in Recruiting Medical Assistants |
| Exhibit B-4 | Degree of Difficulty in Recruiting Nursing Aides, Orderlies, and Attendants |
| Exhibit B-5 | Degree of Difficulty in Recruiting Home Health Aides |

EXHIBIT B-1: Degree of Difficulty in Recruiting Registered Nurses

County/Consortium	Year	Difficulty in Finding Qualified Experienced Applicants				Difficulty in Finding Qualified Inexperienced Applicants			
		No	Little	Some	Much	No	Little	Some	Much
Alameda	2001	7%	13%	33%	47%	n/a	n/a	n/a	n/a
Contra Costa	2001	0%	11%	44%	44%	20%	40%	20%	20%
Fresno	2001	13%	0%	50%	38%	13%	0%	25%	63%
Golden Sierra	2001	11%	0%	11%	78%	0%	0%	0%	100%
Humboldt	2001	0%	0%	50%	50%	14%	14%	14%	57%
Imperial	2001	0%	25%	50%	25%	0%	30%	40%	30%
Kern/Inyo/Mono	2001	20%	20%	20%	40%	9%	9%	36%	46%
Kings	2001	0%	0%	33%	67%	0%	0%	0%	100%
Los Angeles	2001	0%	13%	38%	50%	11%	22%	22%	44%
Madera	1999	0%	29%	29%	43%	13%	50%	13%	25%
Mendocino	2001	0%	0%	43%	57%	0%	0%	38%	63%
Merced	1999	11%	56%	11%	22%	14%	14%	14%	57%
Monterey	2000	20%	0%	80%	0%	31%	15%	23%	31%
Mother Lode	1999	11%	22%	22%	44%	0%	17%	33%	50%
Mother Lode	2001	9%	18%	36%	36%	9%	0%	27%	64%
NBEC	2000	0%	29%	14%	57%	20%	10%	20%	50%
North Central	2001	0%	25%	25%	50%	0%	8%	0%	92%
Orange	2000	20%	30%	20%	30%	20%	20%	40%	20%
Riverside	1999	20%	10%	20%	50%	0%	20%	20%	60%
Sacramento/Yolo	1999	25%	0%	0%	75%	46%	9%	27%	18%
San Benito	1999	0%	11%	44%	44%	0%	0%	100%	0%
San Bernardino	1999	0%	17%	67%	17%	11%	22%	56%	11%
San Diego	2001	0%	14%	43%	43%	13%	13%	38%	38%
San Francisco	2000	0%	22%	11%	67%	0%	0%	50%	50%
San Joaquin	1999	13%	25%	25%	38%	14%	0%	57%	29%
San Luis Obispo	1999	40%	40%	20%	0%	0%	33%	56%	11%
Santa Barbara	2000	13%	50%	13%	25%	0%	14%	29%	57%
Santa Clara	1999	11%	33%	11%	44%	0%	20%	40%	40%
Santa Cruz	2000	0%	0%	40%	60%	0%	0%	71%	29%
Shasta	2001	10%	50%	20%	20%	0%	0%	50%	50%
Stanislaus	2000	0%	60%	20%	20%	0%	29%	14%	57%
Tulare	2001	0%	50%	25%	25%	10%	0%	20%	70%

n/a: Information not available.

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

CCOIS County Consortiums

Golden Sierra - Alpine, El Dorado, Nevada, Placer, and Sierra counties

Monterey Bay - Monterey, San Benito, and Santa Cruz counties (effective 2001)

Mother Lode - Amador, Calaveras, Mariposa, and Tuolumne counties

NBEC (North Bay Employment Connection) - Marin, Napa, Solano, and Sonoma counties (effective 2000)

NoRTEC (Northern Rural Training and Employment Consortium) - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

North Central - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT B-2: Degree of Difficulty in Recruiting Licensed Vocational Nurses

County/Consortium	Year	Difficulty in Finding Qualified Experienced Applicants				Difficulty in Finding Qualified Inexperienced Applicants			
		No	Little	Some	Much	No	Little	Some	Much
Alameda	1999	14%	29%	14%	43%	13%	38%	25%	25%
Contra Costa	2001	0%	20%	40%	40%	0%	0%	38%	63%
Fresno	2001	33%	17%	33%	17%	10%	10%	60%	20%
Golden Sierra	1999	0%	14%	57%	29%	13%	0%	50%	38%
Humboldt	1999	0%	25%	38%	38%	0%	0%	50%	50%
Kern/Inyo/Mono	2001	14%	14%	57%	14%	22%	11%	44%	22%
Kings	2001	0%	25%	25%	50%	33%	0%	33%	33%
Los Angeles	2001	20%	10%	30%	40%	0%	0%	33%	67%
Madera	2000	0%	56%	44%	0%	0%	14%	43%	43%
Mendocino	2000	0%	25%	25%	50%	0%	18%	46%	36%
Mother Lode	1999	13%	63%	25%	0%	17%	17%	33%	33%
NBEC	2000	0%	38%	38%	25%	9%	27%	18%	46%
NoRTEC	2000	0%	75%	25%	0%	25%	17%	25%	33%
North Central	1999	20%	20%	40%	20%	10%	30%	30%	30%
Riverside	1999	60%	30%	0%	10%	50%	33%	0%	17%
Sacramento/Yolo	2001	0%	67%	33%	0%	36%	7%	29%	29%
San Diego	2000	0%	25%	50%	25%	0%	14%	71%	14%
San Francisco	2000	0%	20%	20%	60%	0%	20%	50%	30%
San Joaquin	1999	0%	13%	13%	75%	25%	38%	25%	13%
San Luis Obispo	1999	38%	0%	25%	38%	14%	43%	43%	0%
Santa Barbara	2001	10%	20%	30%	40%	0%	20%	0%	80%
Santa Clara	2000	0%	30%	40%	30%	0%	60%	0%	40%
Shasta	2000	25%	25%	0%	50%	8%	17%	25%	50%
Ventura	2001	0%	40%	40%	20%	8%	0%	54%	39%

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

CCOIS County Consortiums

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Mother Lode - Amador, Calaveras, Mariposa, and Tuolumne counties

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NoRTEC (Northern Rural Training and Employment Consortium) - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

North Central - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT B-3: Degree of Difficulty in Recruiting Medical Assistants

County/Consortium	Year	Difficulty in Finding Qualified Experienced Applicants				Difficulty in Finding Qualified Inexperienced Applicants			
		No	Little	Some	Much	No	Little	Some	Much
Alameda	1999	50%	17%	33%	0%	0%	33%	67%	0%
Butte	2001	0%	17%	50%	33%	17%	50%	25%	8%
Contra Costa	2001	14%	29%	29%	29%	11%	11%	56%	22%
Fresno	1999	18%	36%	36%	9%	55%	36%	0%	9%
Humboldt	1999	10%	40%	20%	30%	0%	20%	20%	60%
Imperial	2000	50%	50%	0%	0%	15%	31%	23%	31%
Kern/Inyo/Mono	2001	0%	40%	20%	40%	17%	17%	42%	25%
Kings	1999	0%	100%	0%	0%	15%	46%	31%	8%
Los Angeles	1999	40%	40%	20%	0%	22%	22%	33%	22%
Mendocino	1999	0%	50%	38%	13%	0%	14%	71%	14%
Monterey	1999	50%	50%	0%	0%	29%	29%	29%	14%
Mother Lode	1999	0%	25%	0%	75%	0%	10%	40%	50%
Napa	1999	0%	0%	50%	50%	31%	15%	46%	8%
NBEC	2001	20%	20%	20%	40%	10%	10%	70%	10%
NoRTEC	2000	17%	33%	17%	33%	0%	38%	25%	38%
North Central	1999	0%	43%	57%	0%	22%	22%	33%	22%
Orange	1999	18%	27%	27%	27%	50%	50%	0%	0%
Riverside	1999	63%	13%	0%	25%	75%	13%	0%	13%
Sacramento/Yolo	2001	17%	33%	17%	33%	20%	30%	30%	20%
San Joaquin	2000	20%	20%	0%	60%	33%	25%	25%	17%
San Luis Obispo	1999	17%	50%	17%	17%	14%	43%	29%	14%
San Mateo	2000	0%	0%	25%	75%	18%	9%	9%	64%
Santa Barbara	1999	25%	25%	25%	25%	0%	50%	20%	30%
Santa Clara	2000	14%	14%	57%	14%	25%	13%	25%	38%
Santa Cruz	1999	29%	29%	0%	43%	13%	38%	50%	0%
Shasta	1999	50%	50%	0%	0%	21%	16%	47%	16%
Sonoma	1999	13%	38%	25%	25%	0%	36%	27%	36%
Stanislaus	2001	14%	14%	57%	14%	25%	38%	38%	0%
Tulare	2000	13%	13%	63%	13%	43%	29%	14%	14%
Ventura	2001	0%	33%	44%	22%	0%	33%	44%	22%

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

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North Central - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT B-4: Degree of Difficulty in Recruiting Nursing Aides, Orderlies, and Attendants

County/Consortium	Year	Difficulty in Finding Qualified Experienced Applicants				Difficulty in Finding Qualified Inexperienced Applicants			
		No	Little	Some	Much	No	Little	Some	Much
Alameda	2001	17%	25%	17%	42%	0%	50%	25%	25%
Butte	1999	17%	33%	50%	0%	27%	9%	46%	18%
Contra Costa	2001	50%	0%	0%	50%	0%	38%	25%	38%
Fresno	2000	17%	17%	33%	33%	30%	0%	60%	10%
Kings	2001	25%	0%	25%	50%	0%	33%	33%	33%
Los Angeles	1999	0%	0%	0%	100%	21%	21%	43%	14%
Merced	2001	29%	14%	14%	43%	13%	13%	38%	38%
Mother Lode	2001	20%	20%	20%	40%	0%	20%	20%	60%
NBEC	2001	50%	0%	50%	0%	8%	23%	23%	46%
North Central	2000	n/a	n/a	n/a	n/a	46%	18%	0%	36%
Orange	2000	0%	43%	57%	0%	25%	0%	25%	50%
Riverside	2001	0%	0%	100%	0%	0%	31%	31%	39%
Sacramento/Yolo	2000	20%	20%	0%	60%	21%	21%	0%	57%
San Benito	1999	11%	22%	22%	44%	n/a	n/a	n/a	n/a
San Francisco	2000	17%	17%	0%	67%	0%	50%	17%	33%
San Joaquin	2000	40%	20%	20%	20%	15%	39%	8%	39%
San Luis Obispo	2001	0%	25%	50%	25%	0%	46%	39%	15%
Santa Barbara	2001	20%	0%	20%	60%	0%	10%	40%	50%
Santa Clara	1999	10%	30%	40%	20%	0%	33%	33%	33%
Shasta	2000	0%	50%	33%	17%	0%	36%	36%	27%
Solano	1999	0%	100%	0%	0%	8%	33%	50%	8%

n/a: Information not available.

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

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North Central - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT B-5: Degree of Difficulty in Recruiting Home Health Aides

County/Consortium	Year	Difficulty in Finding Qualified Experienced Applicants				Difficulty in Finding Qualified Inexperienced Applicants			
		No	Little	Some	Much	No	Little	Some	Much
Alameda	2000	0%	0%	50%	50%	0%	33%	33%	33%
Butte	2001	0%	50%	0%	50%	21%	21%	36%	21%
Contra Costa	2001	0%	0%	67%	33%	22%	22%	33%	22%
Fresno	2001	0%	67%	33%	0%	33%	33%	33%	0%
Golden Sierra	1999	14%	29%	29%	29%	17%	0%	50%	33%
Humboldt	2001	0%	50%	50%	0%	0%	40%	20%	40%
Imperial	2001	n/a	n/a	n/a	n/a	17%	33%	17%	33%
Kern/Inyo/Mono	2000	11%	11%	33%	44%	17%	17%	33%	33%
Los Angeles	2001	73%	0%	9%	18%	40%	20%	20%	20%
Mendocino	2001	0%	0%	0%	100%	14%	43%	29%	14%
Mother Lode	1999	25%	0%	50%	25%	40%	20%	10%	30%
NBEC	2001	20%	20%	20%	40%	10%	0%	20%	70%
NoRTEC	1999	0%	75%	0%	25%	10%	30%	30%	30%
North Central	2000	67%	0%	0%	33%	0%	50%	17%	33%
Orange	2000	18%	18%	27%	36%	50%	0%	25%	25%
Riverside	2000	30%	30%	40%	0%	0%	20%	40%	40%
Sacramento/Yolo	2001	9%	36%	27%	27%	20%	40%	40%	0%
San Bernardino	2000	25%	25%	25%	25%	0%	50%	0%	50%
San Diego	2001	13%	25%	25%	38%	0%	25%	0%	75%
San Joaquin	2000	0%	0%	43%	57%	25%	13%	38%	25%
San Luis Obispo	1999	0%	0%	100%	0%	17%	17%	33%	33%
Santa Barbara	1999	0%	33%	33%	33%	40%	0%	40%	20%
Santa Clara	2001	15%	31%	23%	31%	33%	0%	33%	33%
Santa Cruz	2000	20%	0%	40%	40%	14%	43%	14%	29%
Shasta	1999	0%	0%	50%	50%	6%	33%	28%	33%
Tulare	2000	25%	0%	25%	50%	25%	25%	25%	25%
Ventura	2000	0%	60%	30%	10%	40%	20%	20%	20%

n/a: Information not available.

Source: EDD/LMID, CCOIS *Occupational Outlook Reports*, 1999-2001.

CCOIS County Consortiums

Golden Sierra - Alpine, El Dorado, Nevada, Placer, and Sierra counties

Monterey Bay - Monterey, San Benito, and Santa Cruz counties (effective 2001)

Mother Lode - Amador, Calaveras, Mariposa, and Tuolumne counties

NBEC (North Bay Employment Connection) - Marin, Napa, Solano, and Sonoma counties (effective 2000)

NoRTEC (Northern Rural Training and Employment Consortium) - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

North Central - Colusa, Glenn, Lake, Sutter, and Yuba counties

APPENDIX C

Projections Estimated Opening Per Year Number of Training Programs

- | | |
|--------------------|---|
| Exhibit C-1 | Registered Nurses - State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Board of Registered Nursing Approved Programs |
| Exhibit C-2 | Licensed Vocational Nurses - State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs |
| Exhibit C-3 | Medical Assistants - State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs |
| Exhibit C-4 | Nursing Aides, Orderlies, and Attendants - State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs |
| Exhibit C-5 | Home Health Aides - State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs |

EXHIBIT C-1: State and County or Consortium Projections, Estimated Openings Per Year, and Number of Board of Registered Nursing-Approved Training Programs for Registered Nurses

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	*Number of RN Training Programs
STATEWIDE (2000-2010)	198,200	250,400	52,200	26.3	45,300	9,750	95
Alameda (1999-2006)	8,870	10,180	1,310	14.8	1,080	341	5
Alpine ¹							0
Amador ²							0
Butte (1999-2006)	1,500	1,620	120	8.0	180	43	2
Calaveras ²							0
Colusa ⁴							0
Contra Costa (1999-2006)	4,530	5,460	930	20.5	570	214	2
Del Norte ³							0
El Dorado ¹							0
Fresno (1999-2006)	3,510	4,180	670	19.1	440	159	2
Glenn ⁴							0
Golden Sierra ¹ (1999-2006)	2,020	2,880	860	42.6	280	163	1
Humboldt (1999-2006)	860	900	40	4.7	100	20	2
Imperial (1999-2006)	470	560	90	19.1	60	21	1
Inyo/Mono (1999-2006)	200	220	20	10.0	20	6	0
Kern (1999-2006)	3,160	3,570	410	13.0	380	113	2
Kings (1999-2006)	440	530	90	20.5	60	21	0
Lake ⁴							0
Lassen ³							0
Los Angeles (1999-2006)	51,240	56,520	5,280	10.3	6,100	1,626	26
Madera (1999-2006)	750	910	160	21.3	90	36	0
Marin (1999-2006)	1,400	1,530	130	9.3	170	43	2
Mariposa ²							0
Mendocino (1999-2006)	370	440	70	18.9	50	17	0
Merced (1999-2006)	540	650	110	20.4	70	26	1
Modoc ³							0
Mono (Combined with Inyo Co.)							0
Monterey (1999-2006)	1,830	2,180	350	19.1	230	83	2
Mother Lode ² (1999-2006)	680	810	130	19.1	80	30	0
Napa (1999-2006)	1,350	1,460	110	8.1	160	39	2

*Does not include post-RN training programs or Masters' programs.

Source: EDD/LMID, *Projections of Employment by Occupation*, www.calmis.ca.gov/htmlfile/subject/occproj.htm. Training program information comes from the Bureau of Registered Nursing, *BRN Approved Programs*, www.rn.ca.gov/nursing/nursing.htm (January 2003).

Note: Training programs located in counties that are consortium partners are counted both for the county listing and the consortium listing. However, they are only counted once for the Statewide total.

REGISTERED NURSES – Exhibit C-1 (continued)

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	*Number of RN Training Programs
Nevada ¹							0
NoRTEC ³ (1999-2006)	920	1,060	140	15.2	110	36	0
North Central ⁴ (1997-2004)	940	1,150	210	22.3	110	46	1
Orange (1999-2006)	13,670	15,630	1,960	14.3	1,660	517	4
Placer ¹							1
Plumas ³							0
Riverside (1999-2006)	5,560	6,920	1,360	24.5	710	296	3
Sacramento (1999-2006)	8,380	11,330	2,950	35.2	1,120	581	3
San Benito (1999-2006)	120	150	30	25.0	20	7	0
San Bernardino (1999-2006)	8,830	10,640	1,810	20.5	1,100	416	5
San Diego (1999-2006)	14,130	16,000	1,870	13.2	1,710	511	7
San Francisco (1999-2006)	6,960	7,370	410	5.9	810	174	3
San Joaquin (1999-2006)	2,810	3,250	440	15.7	340	111	1
San Luis Obispo (1999-2006)	1,340	1,470	130	9.7	160	41	1
San Mateo (1999-2006)	3,070	3,420	350	11.4	370	103	1
Santa Barbara (1999-2006)	2,150	2,390	240	11.2	260	71	2
Santa Clara (1999-2006)	10,370	11,560	1,190	11.5	1,240	347	4
Santa Cruz (1999-2006)	1,250	1,320	70	5.6	150	31	1
Shasta (1999-2006)	1,190	1,280	90	7.6	140	33	1
Sierra ¹							0
Siskiyou ³							0
Solano (1999-2006)	1,880	2,080	200	10.6	220	60	1
Sonoma (1999-2006)	2,420	2,730	310	12.8	290	86	2
Stanislaus (1999-2006)	2,190	2,400	210	9.6	260	67	2
Sutter ⁴							0
Tehama ³							0
Trinity ³							0
Tulare (1999-2006)	1,610	1,790	180	11.2	190	53	1
Tuolumne ²							0
Ventura (1999-2006)	3,170	3,420	250	7.9	370	89	2
Yolo (1999-2006)	510	570	60	11.8	60	17	0
Yuba ⁴							1

*Does not include post-RN training programs or Masters' programs.

¹ **Golden Sierra** - Alpine, El Dorado, Nevada, Placer, and Sierra counties

² **Mother Lode** - Amador, Calaveras, Mariposa, and Tuolumne counties

³ **NoRTEC** - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

⁴ **North Central** - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT C-2: State and County or Consortium Projections, Estimated Openings Per Year, and Number of Accredited Training Programs for Licensed Vocational Nurses

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of LVN Training Programs
STATEWIDE (2000-2010)	51,600	63,900	12,300	23.8	14,800	2,710	99
Alameda (1999-2006)	2,180	2,360	180	8.3	340	74	2
Alpine ¹							0
Amador ²							0
Butte (1999-2006)	380	390	10	2.6	60	10	1
Calaveras ²							0
Colusa ⁴							0
Contra Costa (1999-2006)	1,180	1,360	180	15.3	190	53	1
Del Norte ³							1
El Dorado ¹							0
Fresno (1999-2006)	920	1,030	110	12.0	140	36	2
Glenn ⁴							0
Golden Sierra ¹ (1999-2006)	660	840	180	27.3	110	41	1
Humboldt (1999-2006)	250	250	0	0.0	40	6	1
Imperial (1999-2006)	120	140	20	16.7	20	6	1
Inyo/Mono (1999-2006)	50	50	0	0.0	10	1	0
Kern (1999-2006)	690	720	30	4.3	100	19	2
Kings (1997-2004)	120	130	10	8.3	20	4	1
Lake ⁴							0
Lassen ³							1
Los Angeles (1999-2006)	14,650	15,330	680	4.6	2,220	414	32
Madera (1999-2006)	130	150	20	15.4	20	6	0
Marin (1999-2006)	320	330	10	3.1	50	9	0
Mariposa ²							0
Mendocino (1999-2006)	120	130	10	8.3	20	4	2
Merced (1999-2006)	180	200	20	11.1	30	7	1
Modoc ³							0
Mono (Combined with Inyo Co.)							0
Monterey (1999-2006)	350	400	50	14.3	60	16	1
Mother Lode ² (1999-2006)	180	200	20	11.1	30	7	0
Napa (1999-2006)	270	290	20	7.4	40	9	1

Source: EDD/LMID, *Projections of Employment by Occupation*, www.calmis.ca.gov/htmlfile/subject/occproj.htm. Training program information comes from the California Board of Vocational Nursing and Psychiatric Technicians, www.bvnpt.ca.gov/vnschl.htm (January 2003).

Note: Training programs located in counties that are consortium partners are counted both for the county listing and the consortium listing. However, they are only counted once for the Statewide total.

LICENSED VOCATIONAL NURSES – Exhibit C-2 (continued)

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of LVN Training Programs
Nevada ¹							0
NoRTEC ³ (1999-2006)	240	260	20	8.3	40	9	4
North Central ⁴ (1997-2004)	270	310	40	14.8	40	11	2
Orange (1999-2006)	3,640	3,960	320	8.8	560	126	4
Placer ¹							1
Plumas ³							1
Riverside (1999-2006)	1,930	2,350	420	21.8	320	106	6
Sacramento (1999-2006)	2,020	2,520	500	24.8	340	120	3
San Benito (1999-2006)	30	40	10	33.3	10	3	0
San Bernardino (1999-2006)	2,430	2,840	410	16.9	390	114	8
San Diego (1999-2006)	6,400	6,880	480	7.5	980	209	6
San Francisco (1999-2006)	1,420	1,390	-30	-2.1	210	26	2
San Joaquin (1999-2006)	690	750	60	8.7	110	24	1
San Luis Obispo (1999-2006)	300	350	50	16.7	50	14	0
San Mateo (1999-2006)	630	660	30	4.8	100	19	0
Santa Barbara (1999-2006)	620	750	130	21.0	100	33	2
Santa Clara (1999-2006)	2,300	2,430	130	5.7	350	69	2
Santa Cruz (1999-2006)	400	390	-10	-2.5	60	7	0
Shasta (1999-2006)	280	280	0	0.0	40	6	2
Sierra ¹							0
Siskiyou ³							1
Solano (1999-2006)	550	590	40	7.3	90	19	0
Sonoma (1999-2006)	510	560	50	9.8	80	19	1
Stanislaus (1999-2006)	670	710	40	6.0	100	20	1
Sutter ⁴							1
Tehama ³							0
Trinity ³							0
Tulare (1999-2006)	520	530	10	1.9	80	13	4
Tuolumne ²							0
Ventura (1999-2006)	910	930	20	2.2	140	23	2
Yolo (1999-2006)	110	120	10	9.1	20	4	0
Yuba ⁴							1

¹ **Golden Sierra** - Alpine, El Dorado, Nevada, Placer, and Sierra counties

² **Mother Lode** - Amador, Calaveras, Mariposa, and Tuolumne counties

³ **NoRTEC** - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

⁴ **North Central** - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT C-3: State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs for Medical Assistants

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of MA Training Programs
STATEWIDE (2000-2010)	50,500	77,100	26,600	52.7	16,900	4,350	261
Alameda (1999-2006)	1,890	2,370	480	25.4	370	121	8
Alpine ¹							0
Amador ²							0
Butte (1999-2006)	230	280	50	21.7	40	13	2
Calaveras ²							0
Colusa ⁴							0
Contra Costa (1999-2006)	980	1,290	310	31.6	200	73	8
Del Norte ³							0
El Dorado ¹							1
Fresno (1999-2006)	1,410	1,800	390	27.7	280	96	7
Glenn ⁴							0
Golden Sierra ¹ (1999-2006)	340	510	170	50.0	70	34	2
Humboldt (1999-2006)	150	170	20	13.3	30	7	1
Imperial (1999-2006)	90	120	30	33.3	20	7	1
Inyo/Mono (1999-2006)	30	30	0	0.0	10	1	0
Kern (1999-2006)	410	530	120	29.3	80	29	8
Kings (1999-2006)	40	60	20	50.0	10	4	0
Lake ⁴							0
Lassen ³							0
Los Angeles (1999-2006)	12,290	14,360	2,070	16.8	2,290	623	71
Madera (1999-2006)	110	150	40	36.4	20	9	0
Marin (1999-2006)	240	260	20	8.3	40	9	2
Mariposa ²							0
Mendocino (1999-2006)	70	90	20	28.6	10	4	1
Merced (1999-2006)	190	260	70	36.8	40	16	1
Modoc ³							0
Mono (Combined with Inyo Co.)							0
Monterey (1999-2006)	420	550	130	31.0	80	30	2
Mother Lode ² (1999-2006)	60	90	30	50.0	10	6	0
Napa (1999-2006)	180	220	40	22.2	40	11	2

Source: EDD/LMID, *Projections of Employment by Occupation*, www.calmis.ca.gov/htmlfile/subject/occproj.htm. Training program information comes from the 2002 California Training and Education Providers (CTEP), www.soicc.ca.gov/ctep.

Note: Training programs located in counties that are consortium partners are counted both for the county listing and the consortium listing. However, they are only counted once for the Statewide total.

MEDICAL ASSISTANTS – Exhibit C-3 (continued)

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of MA Training Programs
Nevada ¹							0
NoRTEC ³ (1999-2006)	100	130	30	30.0	20	7	0
North Central ⁴ (1997-2004)	120	170	50	41.7	30	11	2
Orange (1999-2006)	4,680	5,810	1,130	24.1	900	290	28
Placer ¹							1
Plumas ³							0
Riverside (1999-2006)	1,570	2,160	590	37.6	320	130	8
Sacramento (1999-2006)	1,460	2,080	620	42.5	300	131	9
San Benito (1999-2006)	10	20	10	100.0	0	1	0
San Bernardino (1999-2006)	1,800	2,380	580	32.2	360	134	22
San Diego (1999-2006)	3,320	3,990	670	20.2	630	186	17
San Francisco (1999-2006)	970	1,170	200	20.6	180	54	4
San Joaquin (1999-2006)	430	560	130	30.2	90	31	3
San Luis Obispo (1999-2006)	340	430	90	26.5	70	23	2
San Mateo (1999-2006)	750	900	150	20.0	140	41	1
Santa Barbara (1999-2006)	260	340	80	30.8	50	19	7
Santa Clara (1999-2006)	2,100	2,740	640	30.5	420	151	11
Santa Cruz (1999-2006)	350	370	20	5.7	60	11	3
Shasta (1999-2006)	210	240	30	14.3	40	10	1
Sierra ¹							0
Siskiyou ³							0
Solano (1999-2006)	270	320	50	18.5	50	14	5
Sonoma (1999-2006)	550	710	160	29.1	110	39	4
Stanislaus (1999-2006)	410	490	80	19.5	80	23	4
Sutter ⁴							2
Tehama ³							0
Trinity ³							0
Tulare (1999-2006)	470	580	110	23.4	90	29	4
Tuolumne ²							0
Ventura (1999-2006)	870	1,040	170	19.5	160	47	10
Yolo (1999-2006)	150	180	30	20.0	30	9	0
Yuba ⁴							0

¹ **Golden Sierra** - Alpine, El Dorado, Nevada, Placer, and Sierra counties

² **Mother Lode** - Amador, Calaveras, Mariposa, and Tuolumne counties

³ **NoRTEC** - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

⁴ **North Central** - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT C-4: State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs for Nursing Aides, Orderlies, and Attendants

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of NA Training Programs
STATEWIDE (2000-2010)	98,300	123,500	25,200	25.6	14,100	3,930	197
Alameda (1999-2006)	3,810	4,340	530	13.9	390	131	8
Alpine ¹							0
Amador ²							0
Butte (1999-2006)	790	840	50	6.3	80	19	4
Calaveras ²							2
Colusa ⁴							0
Contra Costa (1999-2006)	2,210	2,680	470	21.3	240	101	2
Del Norte ³							0
El Dorado ¹							0
Fresno (1999-2006)	2,870	3,400	530	18.5	300	119	5
Glenn ⁴							2
Golden Sierra ¹ (1999-2006)	1,310	1,710	400	30.5	150	79	1
Humboldt (1999-2006)	410	420	10	2.4	40	7	1
Imperial (1999-2006)	150	170	20	13.3	20	6	1
Inyo/Mono (1999-2006)	70	80	10	14.3	10	3	3
Kern (1999-2006)	1,660	1,820	160	9.6	170	47	7
Kings (1999-2006)	240	290	50	20.8	30	11	0
Lake ⁴							1
Lassen ³							0
Los Angeles (1999-2006)	25,080	27,460	2,380	9.5	2,540	703	52
Madera (1999-2006)	380	460	80	21.1	40	17	3
Marin (1999-2006)	840	910	70	8.3	80	21	1
Mariposa ²							0
Mendocino (1999-2006)	220	260	40	18.2	20	9	1
Merced (1999-2006)	490	590	100	20.4	50	21	0
Modoc ³							0
Mono (Combined with Inyo Co.)							0
Monterey (1999-2006)	940	1,120	180	19.1	100	40	2
Mother Lode ² (1999-2006)	320	390	70	21.9	30	14	4
Napa (1999-2006)	590	670	80	13.6	60	20	0

Source: EDD/LMID, *Projections of Employment by Occupation*, www.calmis.ca.gov/htmlfile/subject/occproj.htm. Training program information comes from the 2002 California Training and Education Providers (CTEP), www.soicc.ca.gov/ctep.

Note: Training programs located in counties that are consortium partners are counted both for the county listing and the consortium listing. However, they are only counted once for the Statewide total.

NURSING AIDES, ORDERLIES, and ATTENDANTS – Exhibit C-4 (continued)

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of NA Training Programs
Nevada ¹							0
NoRTEC ³ (1999-2006)	430	490	60	14.0	40	14	1
North Central ⁴ (1997-2004)	470	590	120	25.5	50	24	8
Orange (1999-2006)	5,510	6,400	890	16.2	580	210	10
Placer ¹							1
Plumas ³							1
Riverside (1999-2006)	3,780	4,780	1,000	26.5	410	201	7
Sacramento (1999-2006)	3,490	4,450	960	27.5	380	191	3
San Benito (1999-2006)	60	70	10	16.7	10	3	0
San Bernardino (1999-2006)	4,340	5,370	1,030	23.7	470	214	11
San Diego (1999-2006)	6,990	7,980	990	14.2	720	244	15
San Francisco (1999-2006)	2,940	3,140	200	6.8	290	70	5
San Joaquin (1999-2006)	1,980	2,300	320	16.2	210	76	6
San Luis Obispo (1999-2006)	650	750	100	15.4	70	24	1
San Mateo (1999-2006)	1,760	1,910	150	8.5	180	47	5
Santa Barbara (1999-2006)	1,130	1,240	110	9.7	120	33	3
Santa Clara (1999-2006)	3,700	4,040	340	9.2	370	101	3
Santa Cruz (1999-2006)	610	630	20	3.3	60	11	2
Shasta (1999-2006)	730	800	70	9.6	70	20	2
Sierra ¹							0
Siskiyou ³							0
Solano (1999-2006)	930	1,040	110	11.8	100	30	5
Sonoma (1999-2006)	1,130	1,280	150	13.3	120	39	3
Stanislaus (1999-2006)	1,500	1,640	140	9.3	150	41	3
Sutter ⁴							4
Tehama ³							0
Trinity ³							0
Tulare (1999-2006)	1,380	1,510	130	9.4	140	39	3
Tuolumne ²							2
Ventura (1999-2006)	1,800	1,930	130	7.2	180	44	5
Yolo (1999-2006)	390	440	50	12.8	40	13	1
Yuba ⁴							1

¹ **Golden Sierra** - Alpine, El Dorado, Nevada, Placer, and Sierra counties

² **Mother Lode** - Amador, Calaveras, Mariposa, and Tuolumne counties

³ **NoRTEC** - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

⁴ **North Central** - Colusa, Glenn, Lake, Sutter, and Yuba counties

EXHIBIT C-5: State and County or Consortium Projections, Estimated Openings Per Year, and Number of Training Programs for Home Health Aides

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of HHA Training Programs
STATEWIDE (2000-2010)	33,200	48,000	14,800	44.6	5,200	2,000	106
Alameda (1999-2006)	850	1,040	190	22.4	90	40	5
Alpine ¹							0
Amador ²							0
Butte (1999-2006)	370	420	50	13.5	40	13	2
Calaveras ²							0
Colusa ⁴							0
Contra Costa (1999-2006)	460	600	140	30.4	50	27	2
Del Norte ³							0
El Dorado ¹							0
Fresno (1999-2006)	550	690	140	25.5	60	29	3
Glenn ⁴							0
Golden Sierra ¹ (1999-2006)	360	520	160	44.4	40	29	0
Humboldt (1999-2006)	150	170	20	13.3	20	6	2
Imperial (1999-2006)	80	110	30	37.5	10	6	0
Inyo/Mono (1999-2006)	20	20	0	0.0	0	0	1
Kern (1999-2006)	210	250	40	19.0	20	9	1
Kings (1999-2006)	70	90	20	28.6	10	4	1
Lake ⁴							1
Lassen ³							0
Los Angeles (1999-2006)	6,010	7,070	1,060	17.6	630	241	30
Madera (1999-2006)	70	100	30	42.9	10	6	0
Marin (1999-2006)	190	210	20	10.5	20	6	1
Mariposa ²							1
Mendocino (1999-2006)	70	90	20	28.6	10	4	0
Merced (1999-2006)	180	240	60	33.3	20	11	0
Modoc ³							0
Mono (Combined with Inyo Co.)							0
Monterey (1999-2006)	280	350	70	25.0	30	14	2
Mother Lode ² (1999-2006)	90	130	40	44.4	10	7	1
Napa (1999-2006)	200	230	30	15.0	20	7	0

Source: EDD/LMID, *Projections of Employment by Occupation*, www.calmis.ca.gov/htmlfile/subject/occproj.htm. Training program information comes from the 2002 California Training and Education Providers (CTEP), www.soiccc.ca.gov/ctep.

Note: Training programs located in counties that are consortium partners are counted both for the county listing and the consortium listing. However, they are only counted once for the Statewide total.

HOME HEALTH AIDES – Exhibit C-5 (continued)

County/Consortium and Projection Period	Annual Average Period Start	Annual Average Period End	Absolute Change	Percentage Change	Openings Due to Separations	Estimated Openings Per Year	Number of HHA Training Programs
Nevada ¹							0
NoRTEC ³ (1999-2006)	130	170	40	30.8	10	7	0
North Central ⁴ (1997-2004)	130	170	40	30.8	10	7	3
Orange (1999-2006)	2,150	2,710	560	26.0	240	114	4
Placer ¹							0
Plumas ³							0
Riverside (1999-2006)	460	620	160	34.8	50	30	3
Sacramento (1999-2006)	990	1,430	440	44.4	120	80	1
San Benito (1999-2006)	20	30	10	50.0	0	1	0
San Bernardino (1999-2006)	360	490	130	36.1	40	24	5
San Diego (1999-2006)	3,760	4,550	790	21.0	400	170	8
San Francisco (1999-2006)	1,020	1,210	190	18.6	110	43	5
San Joaquin (1999-2006)	620	840	220	35.5	70	41	3
San Luis Obispo (1999-2006)	30	40	10	33.3	0	1	1
San Mateo (1999-2006)	460	630	170	37.0	50	31	3
Santa Barbara (1999-2006)	160	200	40	25.0	20	9	1
Santa Clara (1999-2006)	980	1,420	440	44.9	120	80	4
Santa Cruz (1999-2006)	80	90	10	12.5	10	3	0
Shasta (1999-2006)	110	120	10	9.1	10	3	1
Sierra ¹							0
Siskiyou ³							0
Solano (1999-2006)	450	520	70	15.6	50	17	2
Sonoma (1999-2006)	690	870	180	26.1	80	37	4
Stanislaus (1999-2006)	250	300	50	20.0	30	11	0
Sutter ⁴							2
Tehama ³							0
Trinity ³							0
Tulare (1999-2006)	190	230	40	21.1	20	9	3
Tuolumne ²							0
Ventura (1999-2006)	360	410	50	13.9	40	13	4
Yolo (1999-2006)	n/a	n/a	n/a	n/a	n/a	n/a	0
Yuba ⁴							0

¹ **Golden Sierra** - Alpine, El Dorado, Nevada, Placer, and Sierra counties

² **Mother Lode** - Amador, Calaveras, Mariposa, and Tuolumne counties

³ **NoRTEC** - Del Norte, Lassen, Modoc, Plumas, Siskiyou, Tehama, and Trinity counties

⁴ **North Central** - Colusa, Glenn, Lake, Sutter, and Yuba counties

Find a Match for Your Interests in the Health Care Industry

Large health care facilities operate around the clock, seven days a week and employ many kinds of workers. Few industries offer such a wide variety of occupations. Occupations below in **bold** are found only in health care. The other occupations listed are found in health care as well as other industries.

Interests generally refer to the like or dislike of activities. Many interest assessment tools used in schools, colleges, and one stop centers draw upon the personality-based theory of John L. Holland which advocates you will function best and find job fulfillment in work environments that are in harmony with your personality.

Human personalities and work environments can be broadly classified into the six broad categories of vocational personalities and environments described below. Personalities and occupations are combinations of more than one interest area. Occupations are listed below under their highest interest category.

What Are Your Interests?	Find Matching Occupations in the Health Care Industry
<p>REALISTIC OCCUPATIONS frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.</p>	<p>Biomedical Equipment Technicians ■ Carpenters ■ Computer Operators ■ Couriers & Messengers ■ CT Technologists ▲ Dental Laboratory Technicians ■ Dining Room and Cafeteria Attendants ■ Dishwashers ■ EKG Technicians ■ Electricians ■ Food Concession Counter Attendants ■ Food Preparation Workers ■ General Maintenance & Repair Workers ■ Heating and Air Conditioning Mechanics ■ Institution or Cafeteria Cooks ■ Janitors and Cleaners ■ Landscaping & Groundskeeping Workers ■ Laundry Workers ■ Light Truck Drivers ■ Maids and Housekeeping Cleaners ■ Mechanical Engineers ■ Medical and Clinical Laboratory Technicians ■ Medical Appliance Technicians ■ Medical Equipment Preparers ■ Medical Equipment Repairers ■ MRI Technologists ■ Painters ■ Parking Lot Attendants ■ Phlebotomists ■ Plumbers ■ Radiologic Technologists and Technicians ■ Short Order Cooks ■ Stationary Engineers and Boiler Operators ■ Surgical Technologists ■ Taxi Drivers and Chauffeurs ■ Ultrasound Technologists</p>
<p>INVESTIGATIVE OCCUPATIONS frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.</p>	<p>Cardiovascular Technologists and Technicians ▲ Chiropractors ■ Compensation, Benefits, and Job Analysis Specialists ■ Computer Support Specialists ■ Computer Programmers ■ Computer Systems Analysts ■ Cytotechnologists ■ Database Administrators ■ Dentists ■ Dietitians and Nutritionists ■ Environment Science and Protection Technicians ■ Epidemiologists ■ Health Specialties Teachers, Postsecondary ■ Histotechnicians ■ Histotechnologists ■ Management Analysts ■ Medical and Clinical Lab Technologists ■ Medical Scientists ■ Microbiologists ■ Nuclear Medicine Technologists ■ Operations Research Analysts ■ Optometrists ■ Perfusionists ■ Pharmacists ■ Physician Assistants ■ Physicians and Surgeons ■ Psychologists ■ Respiratory Therapists</p>

<p>ARTISTIC OCCUPATIONS frequently involve working with forms, designs, and patterns. They often require self-expression and the work can be done without following a clear set of rules.</p>	<p>Art Therapists Dance Therapists Medical Illustrators Medical Photographers Music Therapists</p>
<p>SOCIAL OCCUPATIONS frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.</p>	<p>Ambulance Drivers and Attendants ■ Audiologists ■ Certified Nursing Assistants ■ Clinical Psychologists ■ Dental Assistants ■ Dental Hygienists ■ Dietetic Technicians ■ Dispatchers, Police, Fire, and Ambulance ■ Educational, Vocational, and School Counselors ■ Emergency Medical Technicians and Paramedics ■ Home Health Aides ■ Librarians ■ Licensed Vocational Nurses ■ Medical and Public Health Social Workers ■ Medical Assistants ■ Mental Health & Substance Abuse Social Workers ■ Non-restaurant Food Servers ■ Nursing Aides, Orderlies, and Attendants ■ Nursing Instructors ■ Occupational Therapist Aides & Assistants ■ Occupational Therapists ■ Orthotists ■ Personal and Home Care Aides ■ Physical Therapist Aides ■ Physical Therapist Assistants ■ Physical Therapists ■ Podiatrists ■ Prosthetists ■ Psychiatric Aides ■ Psychiatric Technicians ■ Radiation Therapists ■ Recreation Workers ■ Recreational Therapists ■ Registered Nurses ■ Security Guards ■ Social and Human Service Assistants ■ Speech-Language Pathologists ■ Training and Development Specialists ■ Vocational Education Teachers</p>
<p>ENTERPRISING OCCUPATIONS frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.</p>	<p>Administrative Service Managers ■ Claims Adjusters, Examiners, and Investigators ■ Computer and Information Systems Managers ■ Cosmetologists ■ Dispensing Opticians ■ Employment, Recruitment, and Placement Specialists ■ Financial Managers ■ Food Service Managers ■ Housekeeping Supervisors ■ Human Resource Managers ■ Insurance Sales Agents ■ Marketing Managers ■ Medical and Health Service Managers ■ Public Relations Managers ■ Public Relations Specialists ■ Purchasing Agents ■ Purchasing Managers</p>
<p>CONVENTIONAL OCCUPATIONS frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.</p>	<p>Accountants and Auditors ■ Bill and Account Collectors ■ Billing and Posting Clerks and Machine Operators ■ Bookkeeping, Auditing, and Accounting Clerks ■ Budget Analysts ■ Cashiers ■ Customer Service Representatives ■ Data Entry Keyers ■ File Clerks ■ General Office Clerks ■ Human Resources Assistants ■ Insurance Claims & Policy Processing Clerks ■ Interviewers ■ Mail Clerks & Mail Machine Operators ■ Medical Coders ■ Medical Records and Health Info Technicians ■ Medical Secretaries ■ Medical Transcriptionists ■ Order Clerks ■ Payroll and Timekeeping Clerks ■ Pharmacy Technicians ■ Procurement Clerks ■ Receptionists and Information Clerks ■ Shipping, Receiving, and Traffic Clerks ■ Statistical Assistants ■ Stock Clerks ■ Switchboard Operators ■ Word Processors & Typists</p>

Source: J.L. Holland, *Making Vocational Choices: A theory of vocational personalities and work environments*, (3rd ed.), Psychological Assessment Resources, Inc., Odessa, FL, 1997, cited by James Rounds et al, *Development of Occupational Interest Profiles for O*NET*, National Center for O*NET Development, Raleigh, N.C., 1999, p.2. Data retrieved from O*Net Online at online.onetcenter.org/main.html

APPENDIX E: Ratings of Work Values and Corresponding Needs for the Five Focus Health Care Occupations

Work Values and Corresponding Needs	Registered Nurses	Licensed Vocational Nurses	Medical Assistants	Nursing Aides, Orderlies, Attendants	Home Health Aides
Relationships-Mean Extent	82	80	69	75	61
Social Service	100	97	69	84	94
Moral Values	56	59	75	72	69
Co-workers	91	84	63	69	22
Support-Mean Extent	36	38	55	55	34
Supervision, Human Relations	47	50	63	59	34
Company Policies & Practices	31	28	59	53	34
Supervision, Technical	31	34	44	53	34
Working Conditions-Mean Extent	51	43	54	48	51
Security	75	66	66	66	53
Activity	84	72	53	63	50
Variety	59	50	53	50	53
Independence	13	9	31	41	53
Working Conditions	19	19	59	38	50
Compensation	53	44	59	34	44
Achievement-Mean Extent	84	75	53	39	42
Achievement	84	78	56	44	53
Ability Utilization	84	72	50	34	31
Recognition-Mean Extent	45	32	44	27	31
Social Status	69	59	53	34	44
Advancement	41	13	41	28	25
Authority	56	41	31	25	22
Recognition	16	16	50	22	34
Independence-Mean Extent	48	32	21	11	32
Autonomy	44	28	28	16	44
Creativity	47	38	16	13	25
Responsibility	53	31	19	6	28

Source: Trefoil, *Occupational Viewer 2000* with O*NET in it

Satisfy Your Values in Health Care Careers!

Work Values and Corresponding Needs	Health Care Occupations That Offer Moderate or Considerable (bolded titles) Opportunity to Satisfy Value and Needs
<p>ACHIEVEMENT</p> <p>Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment.</p> <ul style="list-style-type: none"> • <u>Achievement</u> Workers on this job get a feeling of accomplishment • <u>Ability Utilization</u> Workers on this job make use of their individual abilities 	<p>Ambulance Drivers ■ Art Therapists ▲ Audiologists ■ Cardiovascular Technologists & Technicians ■ Chiropractors ■ CT Technologists ■ Cytotechnologists ■ Dance Therapists ■ Dental Assistants ■ Dental Hygienists ■ Dental Laboratory Technicians ■ Dentists ■ Dietetic Technicians ■ Dietitians & Nutritionists ■ Educational, Vocational, and School Counselors ■ EKG Technicians ■ Emergency Medical Technicians ■ Environmental Science & Protection Technicians ■ Epidemiologists ■ Licensed Vocational Nurses ■ Medical & Clinical Lab Technicians & Technologists ■ Medical & Health Service Managers ■ Medical Appliance Technicians ■ Medical Assistants ■ Medical Coders ■ Medical Equipment Repairers ■ Medical Scientists ■ Microbiologists ■ MRI Technologists ■ Nuclear Medicine Technologists ■ Nursing Instructors ■ Occupational Therapist Aides & Assistants ■ Occupational Therapists ■ Opticians ■ Optometrists ■ Orthotists ■ Pharmacists ■ Pharmacy Techs ■ Physical Therapist Aides & Assistants ■ Physical Therapists ■ Physician Assistants ■ Physicians & Surgeons ■ Podiatrists ■ Prosthetists ■ Psychiatric Technicians ■ Psychologists ■ Radiation Therapists ■ Radiologic Technologists ■ Recreation Workers ■ Recreational Therapists ■ Registered Nurses ■ Respiratory Therapists ■ Social & Human Service Assts ■ Social Workers ■ Speech-Language Pathologists ■ Surgical Technologists ■ Ultrasound Technologists ■ Vocational Education Teachers</p>
<p>INDEPENDENCE</p> <p>Occupations that satisfy this work value allow employees to work on their own and make decisions.</p> <ul style="list-style-type: none"> • <u>Autonomy</u> Workers on this job plan their work with little supervision • <u>Creativity</u> Workers on this job try out their own ideas • <u>Responsibility</u> Workers on this job make decisions on their own 	<p>Art Therapists ■ Audiologists ■ Chiropractors ■ CT Technologists ■ Cytotechnologists ■ Dance Therapists ■ Dentists ■ Dietitians & Nutritionists ■ Educational, Vocational, and School Counselors ■ EKG Technicians ■ Environmental Science & Protection Technicians ■ Epidemiologists ■ Medical & Clinical Lab Technologists ■ Medical & Health Service Managers ■ Medical Appliance Technicians ■ Medical Equipment Repairers ■ Medical Scientists ■ Microbiologists ■ MRI Technologists ■ Nursing Instructors ■ Occupational Therapists ■ Opticians ■ Optometrists ■ Orthotists ■ Pharmacists ■ Physical Therapists ■ Physicians & Surgeons ■ Podiatrists ■ Prosthetists ■ Psychologists ■ Radiologic Technologists ■ Recreation Workers ■ Recreational Therapists ■ Respiratory Therapists ■ Social & Human Service Assts ■ Social Workers ■ Speech-Language Pathologists ■ Surgical Technologists ■ Ultrasound Technologists ■ Vocational Education Teachers</p>
<p>RECOGNITION</p> <p>Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious.</p> <ul style="list-style-type: none"> • <u>Social Status</u> Workers on this job are looked up to by others in their company and their community • <u>Advancement</u> Workers on this job have opportunities for advancement • <u>Authority</u> Workers on this job give directions and instructions to others • <u>Recognition</u> Workers on this job receive recognition for the work they do 	<p>Art Therapists ■ Audiologists ■ Cardiovascular Technologists & Technicians ■ Chiropractors ■ CT Technologists ■ Cytotechnologists ■ Dance Therapists ■ Dental Hygienists ■ Dentists ■ Dietitians & Nutritionists ■ Educational, Vocational, & School Counselors ■ EKG Technicians ■ Environmental Science & Protection Technicians ■ Epidemiologists ■ Medical & Clinical Lab Technologists ■ Medical & Health Service Managers ■ Medical Scientists ■ Microbiologists ■ MRI Technologists ■ Nursing Instructors ■ Occupational Therapists ■ Opticians ■ Optometrists ■ Orthotists ■ Pharmacists ■ Physical Therapists ■ Physician Assistants ■ Physicians & Surgeons ■ Podiatrists ■ Prosthetists ■ Psychologists ■ Radiologic Technologists ■ Recreational Therapists ■ Respiratory Therapists ■ Social & Human Service Assts ■ Social Workers ■ Speech-Language Pathologists ■ Ultrasound Technologists ■ Vocational Education Teachers</p>

<p>RELATIONSHIPS</p> <p>Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment.</p> <ul style="list-style-type: none"> • <u>Social Service</u> Workers on this job have work where they do things for other people • <u>Moral Values</u> Workers on this job are never pressured to do things that go against their sense of right and wrong • <u>Co-workers</u> Workers on this job have co-workers who are easy to get along with 	<p>Art Therapists ■ Ambulance Drivers ■ Audiologists ■ Cardiovascular Technologists & Technicians ■ Certified Nursing Assistants ■ Chiropractors ■ CT Technologists ■ Dance Therapists ■ Dental Assistants ■ Dental Hygienists ■ Dental Laboratory Technicians ■ Dentists ■ Dietetic Technicians ■ Dietitians & Nutritionists ■ Educational, Vocational, and School Counselors ■ EKG Technicians ■ Emergency Medical Technicians ■ Epidemiologists ■ Home Health Aides ■ Licensed Vocational Nurses ■ Medical & Clinical Lab Technicians & Technologists ■ Medical & Health Service Managers ■ Medical Appliance Technicians ■ Medical Assistants ■ Medical Equipment Preparers ■ Medical Equipment Repairers ■ Medical Records & Health Info Techs ■ Medical Scientists ■ Medical Secretaries ■ MRI Technologists ■ Nuclear Medicine Technologists ■ Nursing Instructors ■ Occupational Therapist Aides & Assistants ■ Occupational Therapists ■ Opticians ■ Optometrists ■ Orthotists ■ Personal & Home Care Aides ■ Pharmacists ■ Pharmacy Techs ■ Physical Therapist Aides & Assistants ■ Physical Therapists ■ Physician Assistants ■ Physicians & Surgeons ■ Podiatrists ■ Prothetists ■ Psychiatric Aides ■ Psychiatric Technicians ■ Psychologists ■ Radiation Therapists ■ Radiologic Technologists ■ Recreation Workers ■ Recreational Therapists ■ Registered Nurses ■ Respiratory Therapists ■ Social & Human Service Assts ■ Social Workers ■ Speech-Language Pathologists ■ Surgical Technologists ■ Ultrasound Technologists ■ Vocational Education Teachers</p>
<p>SUPPORT</p> <p>Occupations that satisfy this work value offer supportive management that stands behind employees.</p> <ul style="list-style-type: none"> • <u>Supervision, Human Relations</u> Workers on this job have supervisors who back up their workers with management • <u>Company Policies and Practices</u> Workers on this job are treated fairly by the company • <u>Supervision, Technical</u> Workers on this job have supervisors who train their workers well 	<p>Ambulance Drivers ■ Cardiovascular Technologists & Technicians ■ Certified Nursing Assistants ■ Dental Assistants ■ Dental Laboratory Technicians ■ Dietetic Technicians ■ Emergency Medical Technicians ■ Environmental Science & Protection Technicians ■ Licensed Vocational Nurses ■ Medical & Clinical Lab Technicians & Technologists ■ Medical Appliance Technicians ■ Medical Assistants ■ Medical Coders ■ Medical Equipment Preparers ■ Medical Equipment Repairers ■ Medical Records & Health Info Techs ■ Medical Secretaries ■ Nursing Aides, Orderlies, & Attendants ■ Nursing Instructors ■ Occupational Therapist Aides & Assistants ■ Orthotists ■ Personal & Home Care Aides ■ Pharmacy Techs ■ Physical Therapist Aides & Assistants ■ Prothetists ■ Psychiatric Aides ■ Psychiatric Technicians ■ Radiation Therapists ■ Recreation Workers ■ Social & Human Service Assts ■ Social Workers ■ Surgical Technologists ■ Vocational Education Teachers</p>
<p>WORKING CONDITIONS</p> <p>Occupations that satisfy this work value offer job security and good working conditions.</p> <ul style="list-style-type: none"> • <u>Security</u> Workers on this job have steady employment • <u>Activity</u> Workers on this job are busy all the time • <u>Variety</u> Workers on this job have something different to do every day • <u>Independence</u> Workers on this job do their work alone • <u>Working Conditions</u> Workers on this job have good working conditions • <u>Compensation</u> Workers on this job are paid well in comparison with other workers 	<p>Art Therapists ■ Audiologists ■ Cardiovascular Technologists & Technicians ■ Chiropractors ■ CT Technologists ■ Cytotechnologists ■ Dance Therapists ■ Dental Assistants ■ Dental Hygienists ■ Dental Laboratory Technicians ■ Dentists ■ Dietetic Technicians ■ Dietitians & Nutritionists ■ Educational, Vocational, and School Counselors ■ EKG Technicians ■ Environmental Science & Protection Technicians ■ Epidemiologists ■ Home Health Aides ■ Medical & Clinical Lab Technicians & Technologists ■ Medical & Health Service Managers ■ Medical Appliance Technicians ■ Medical Assistants ■ Medical Coders ■ Medical Equipment Preparers ■ Medical Equipment Repairers ■ Medical Records & Health Info Techs ■ Medical Scientists ■ Medical Secretaries ■ Microbiologists ■ MRI Technologists ■ Nuclear Medicine Technologists ■ Nursing Instructors ■ Occupational Therapist Aides & Assistants ■ Occupational Therapists ■ Opticians ■ Optometrists ■ Orthotists ■ Nursing Instructors ■ Pharmacists ■ Pharmacy Techs ■ Physical Therapist Aides & Assistants ■ Physical Therapists ■ Physician Assistants ■ Physicians & Surgeons ■ Podiatrists ■ Prothetists ■ Psychiatric Aides ■ Psychiatric Technicians ■ Psychologists ■ Radiation Therapists ■ Radiologic Technologists ■ Recreation Workers ■ Recreational Therapists ■ Registered Nurses ■ Respiratory Therapists ■ Social & Human Service Assts ■ Social Workers ■ Speech-Language Pathologists ■ Surgical Technologists ■ Ultrasound Technologists ■ Vocational Education Teachers</p>
Source: <i>Occupational Information Network (O*NET)</i>	

APPENDIX G: Methodology Used for Measuring Occupational Fit

Method for measuring occupational fit

As part of O*NET development, an “Occupational Fit Index” was devised by America’s Institute of Research (AIR)¹ for the U.S. Department of Labor to measure the match potential of two occupations across selected variables in the O*NET database. This index was based on a formula that included the following:

- Eliminating elements (e.g., skills, knowledge, abilities) rated not important to the target (or desired) occupation
- Calculating “Fit” designations of Good, Fair, or Poor for individual work elements, based on the numerical difference in required level ratings between two occupations
- Multiplying Level fit values by Importance ratings to calculate an “adjusted fit value”

Formula modified

Although DOL did not include the Occupational Fit Index in their published O*NET product, it was adopted and is currently in use by the Texas *Occupation and Skill Computer-Assisted Researcher* (OSCAR) career product.

For purposes of this report, the above Index was modified and the following steps used to determine fit:

- The top ten Important and top ten Level elements for RN were selected and compared to individual ratings of the focus occupation.
- A designation of “Good Fit” was assigned to each O*NET element comparison made between RN and a selected focus occupation whose difference amounted to 14 points or less on the standard 0-100 scale. This calculation is based on the AIR Index model, which originally used a 0-7 Scale and determined, “if the two mean levels deviate by no more than 1 point, the fit is Good.”²

¹ Norman Peterson, et al., *O*NET Electronic Codebook*, American Institute of Research, 1995.

² Ibid.

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